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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/540,771	06/24/2005	Toshiro Kinoshita	970.1012	7143
21171	7590	10/17/2008	EXAMINER	
STAAS & HALSEY LLP			HIGGINS, GERARD T	
SUITE 700			ART UNIT	
1201 NEW YORK AVENUE, N.W.			PAPER NUMBER	
WASHINGTON, DC 20005			1794	
			MAIL DATE	DELIVERY MODE
			10/17/2008	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/540,771

**Applicant(s)**

KINOSHITA ET AL.

**Examiner**

GERARD T. HIGGINS

**Art Unit**

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 August 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 7-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SG/US)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Amendment*

1. The amendment filed 08/12/2008 has been entered. Currently claims 1-13 are pending and claims 7-13 are withdrawn from consideration.

### *Claim Rejections - 35 USC § 102*

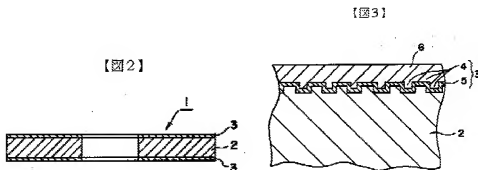
2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Otomo (JP 2000-011448), machine translation included.

Otomo teaches the invention of Figures 2 and 3.



Otomo teaches that polycarbonate in the substrates of optical recording media are harmful for the environment [0002]. He plans to rectify this by making the substrate of

Art Unit: 1794

the optical recording medium out of biodegradable resins [0005] and [0006]. He teaches that a biodegradable resin include polypropylene [0009] or BIONOLLE [0010], which are also proposed in applicants' specification. The optical disc **1** has a substrate **2** of biodegradable resin and a recording layer **3** formed on both sides of the substrate [0018]. The recording layer **3** has a base material layer **6**. Otomo teach that the base material layer **6** is formed using the same plastic material as the substrate **2**. Applicants state in their specification at page 9, line 20 to page 10, line 4 that the non-hydrophilic film is preferentially composed of the same types of resin that is in the biodegradable substrate layer; therefore, the base material layer of Otomo is made from an inherently non-hydrophilic (hydrophobic) material.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Otomo (JP 2000-011448).

Otomo teaches all the limitations of applicants' claim 1 in section 3 above; however, he fails to teach a protective layer for protecting the recording layer.

It has been held that "mere duplication of parts has no patentable significance unless a new and unexpected result is produced." Please see MPEP 2144.04 and *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to merely duplicate the base material layer **6** in order to provide extra water fastness and abrasion resistance for the recording layer.

6. Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Otomo (JP 2000-011448) in view of Matsuishi et al. (5,972,457).

Otomo teaches that polycarbonate in the substrates of optical recording media are harmful for the environment [0002]. He plans to rectify this by making the substrate of the optical recording medium out of biodegradable resins [0005] and [0006]. He teaches that a biodegradable resin include polypropylene [0009] or BIONOLLE [0010], which are also proposed in applicants' specification. The optical disc **1** has a substrate **2** of biodegradable resin and a recording layer **3** formed on at least one side of the substrate [0018]. The recording layer **3** has a base material layer **6**. Otomo teach that the base material layer **6** is formed using the same plastic material as the substrate **2**. Applicants state in their specification at page 9, line 20 to page 10, line 4 that the non-hydrophilic film is preferentially composed of the same types of resin that is in the biodegradable substrate layer; therefore, the base material layer of Otomo may be made from an inherently non-hydrophilic (hydrophobic) material; however, Otomo fails to teach a printing layer provided on the opposite side of the substrate on which the

recording layer is provided wherein the printing layer has a base material layer comprised of a non-hydrophilic film and a protective layer for protecting the recording layer.

With regard to the fact that the Examiner is removing a recording layer from one side of the optical recording disc **1** and replacing it with a printing layer, it has been held that "omission of an element and its function is obvious if the function of the element is not desired." Please see MPEP 2144.04 and *Ex parte Wu*, 10 USPQ 2031 (Bd. Pat. App. & Inter. 1989). Making a dual-sided optical recording medium into a single-sided optical recording medium would not produce an unobvious result; further, one of ordinary skill in the art of optical recording media are well versed in preparing single-sided dual-recording layer media, dual-sided dual-recording layer media, or any other possible combination.

Matsuishi et al. teach a printable optical recording medium, which has a protective layer (base material layer) and an ink-receiving layer (Abstract). They teach at col. 7, lines 25-30 that the base material layer and ink-receiving layer may be combined with each other or they may include a plurality of layers. They teach at col. 9, lines 45-51 the properties of their ink-receiving/base material layers, which include *inter alia* water resistance (hydrophobic) and hardness (abrasion resistance). The ink-receiving layer may be used in conjunction with oil-based inks (col. 10, lines 21-25); further, they teach at col. 11, lines 17-46 that the polymers in their base material layer and ink-receiving layer have a higher hydrophobic property than prior art receiving layers/base material layers. From all of this evidence, the Examiner deems that the

base material layer of Matsuishi et al. intrinsically comprises a non-hydrophilic (hydrophobic) film.

Since Matsuishi et al. and Otomo are both drawn to optical recording media, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the protective layer and ink-receiving layers of Matsuishi et al. in the optical disc of Otomo. The results of which would have been completely predictable to one having ordinary skill; further, the components would have performed the same in combination as they had separately. Another motivation for combining these references would be to lead to an optical disc that was customizable by the consumer.

With regard to claim 4, it has been held that "mere duplication of parts has no patentable significance unless a new and unexpected result is produced." Please see MPEP 2144.04 and *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to merely duplicate the base material layer 6 in order to provide extra water fastness and abrasion resistance for the recording layer.

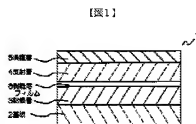
7. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Otomo (JP 2000-011448) in view of Matsuishi et al. (5,972,457), as applied to claim 2, further in view of Ota (JP 2000-030302), machine translation included.

Otomo in view of Matsuishi et al. render obvious all of the limitations of applicants' claim 2 in section 6 above; however, they fail to disclose a release layer

Art Unit: 1794

provided between the substrate and the recording layer or between the substrate and the printing layer.

Ota teaches the device of Figure 1.



The device has a release layer 6 disposed in between the recording layer 3 and a substrate 5 [0014].

Since Otomo, Matsuishi et al. and Ota are all drawn to optical recording media, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the release layer of Ota in between the substrate and recording layer of the medium of Otomo in view of Matsuishi et al. The results of this combination would have been completely predictable to one having ordinary skill in the art of optical recording media; further, each of the components would perform the same in combination as they did separately. Another motivation for combining these references can be found in Ota at [0021], which discloses that the release provide an extra level of security, wherein the information of the optical disc can be completely destroyed at the time of disposal; further, one of ordinary skill would recognize that this would allow for separation and potential recycling of the individual layers of the optical recording medium.



With regard to claim 6, it has been held that "mere duplication of parts has no patentable significance unless a new and unexpected result is produced." Please see MPEP 2144.04 and *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960).

It would have been obvious to one having ordinary skill in the art of optical recording media to include a release layer at any position in the optical recording medium strata, including in between the printing layer and the substrate as claimed. A motivation for doing so would be additional security as it would allow one to dispose of the printing layer, which might have important information thereon, or for affording separation and potential recycling of the individual layers of the optical recording medium.

### ***Response to Arguments***

8. Applicant's arguments, see Remarks, filed 08/12/2008, with respect to the objections to the specification and the objections to the claims have been fully considered and are persuasive. The objections have been withdrawn.

9. Applicant's arguments filed 08/12/2008 have been fully considered but they are not persuasive.

First, applicants are attempting to argue that the base material layer of Otomo is not hydrophobic (i.e. "non-hydrophilic").

The Examiner respectfully disagrees. The two examples of resins that the Examiner cited in his rejection as taught in Otomo are inherently hydrophobic; clearly

the Examiner was referring to these resins **only** when he made the comment that the base material layer made of these hydrophobic resins would inherently be hydrophobic.

The Examiner has shown an optical recording medium that comprises all of the layers of applicants' claim 1 in section 3 above. The base material layer and the substrate may be comprised of polypropylene as taught by Otomo. Applicants freely admit that the base material layer may be polypropylene in their specification (page 9, lines 20-25) and in their Remarks (page 9, last paragraph). If the base material layer and the substrate are comprised of polypropylene as taught by Otomo, it will result in a base material layer that is inherently/intrinsically non-hydrophilic because polypropylene is a hydrophobic resin.

While Otomo does disclose other resins for the base material layer other than polypropylene and Bionolle, the fact remains that Otomo does explicitly disclose the use of non-hydrophilic base material layer. Although Otomo discloses the use of other types of base material layer materials, applicant's attention is drawn to MPEP 2131.02 (A) which states that "...when the species is clearly named, the species claim is anticipated no matter how many other species are additionally named". *Ex Parte A*, 17 USPQ2d 1716 (Bd. Pat. App. & Inter. 1990).

With regard to applicants' "second" argument, it is not clear what applicants are attempting to argue given that applicant says the Examiner incorrectly asserted that the present invention uses polypropylene and Bionolle since these are used in the substrate of the present invention and not the base material layer; however, applicants then go on to say that preferable examples of the base material layer are polypropylene and that

the non-hydrophilic film is the same as the biodegradable resin, which supports what the Examiner originally set forth.

With regard to applicants' argument that the base material layer of Otomo in view of Matsuishi et al. is not a "non-hydrophilic film," the Examiner respectfully disagrees. The Examiner set forth in the previous office action and above that Matsuishi et al. point specifically to hydrophobic polymers seen at col. 11, lines 17-45 such as alkyl (meth)acrylates seen at col. 11, lines 35; further, one may look to Example 12 (col. 29, lines 40-64), which disclose a non-hydrophilic film.

With regard to applicants' argument that the Examiner has no reason to combine the Otomo and Matsuishi et al., the Examiner did in fact suggest a reason to combine in section 6 above, wherein the optical disc would be customizable, which would present a selling point to customers.

With regard to applicants' argument that Ota is drawn to a polycarbonate substrate and not a biodegradeable or polyolefin resin as claimed, it has been held that one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The Examiner is merely inserting the release layer of Ota between the substrate and recording layer of the medium of Otomo in view of Matsuishi et al. The Examiner is not purporting substituting the substrate of Ota.

***Conclusion***

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GERARD T. HIGGINS whose telephone number is (571)270-3467. The examiner can normally be reached on M-F 9:30am-7pm est. (1st Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on 571-272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1794

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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